ONWA®

MARINE ELECTRONICS

KP-27 (7-inch)   **KP-25** (5-inch)   **KP-29** (9-inch)

NEW!
KP SERIES

GPS Chart Plotter with built-in Fish Finder and Class B+ AIS Transponder

K-CHART
Free detailed sea map

Proximity waypoint alarm

Gauges
Displays Engine, Genset, Rudder, and working condition

GO TO TRACK NAVIGATION
Leads you back home

Different color palettes

SD Card System Update

Tide Table

Celestial

Display AIS Info

IP66
Ingress Protection

Multiple display modes

NAVIONICS
A Garmin Brand
Compatible with Navionics+

C-MAP®
Support C-Map MAX

NMEA 2000
NMEA0183 NMEA2000
NMEA Interface

KP-25
5" GPS Chart Plotter

KP-25A
5" GPS Chart Plotter with Class B+ AIS Transponder

KP-25F
5" GPS Chart Plotter with built-in Fish Finder

KP-25X
5" GPS Chart Plotter with built-in Fish Finder
and Class B+ AIS Transponder

KP-27
7" GPS Chart Plotter

KP-27A
7" GPS Chart Plotter with Class B+ AIS Transponder

KP-27F
7" GPS Chart Plotter with built-in Fish Finder

KP-27X
7" GPS Chart Plotter with built-in Fish Finder
and Class B+ AIS Transponder

KP-29
9" GPS Chart Plotter

KP-29A
9" GPS Chart Plotter with Class B+ AIS Transponder

KP-29F
9" GPS Chart Plotter with built-in Fish Finder

KP-29X
9" GPS Chart Plotter with built-in Fish Finder
and Class B+ AIS Transponder

❯ KP SERIES Plotter Comparison

KP-25 Plotter Comparison

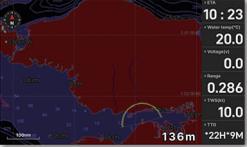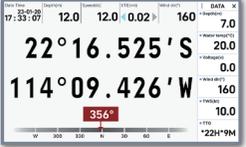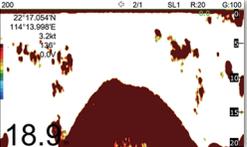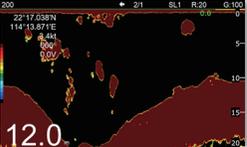| Model	KP-25	KP-25A	KP-25F	KP-25X
Display Size	5"	5"	5"	5"
Resolution	800x480	800x480	800x480	800x480
LCD Brightness	1000 nit	1000 nit	1000 nit	1000 nit
GNSS	GPS + Beidou + GLONASS	GPS + Beidou	GPS + Beidou + GLONASS	GPS + Beidou
Navionics+ Compatible	NAVIONICS A Garmin Brand	NAVIONICS A Garmin Brand	NAVIONICS A Garmin Brand	NAVIONICS A Garmin Brand
C-Map Max Compatible	C-MAP	C-MAP	C-MAP	C-MAP
K-Chart Map	K-CHART	K-CHART	K-CHART	K-CHART
NMEA Interface	NMEA0183 NMEA2000	NMEA0183 NMEA2000	NMEA0183 NMEA2000	NMEA0183 NMEA2000
GPS Antenna				
Fish Finder Feature	NO	NO	Dual Frequency (50 &200KHz)	Dual Frequency (50 &200KHz)
Built-in AIS	NO	Class B+	NO	Class B+
MULTIPLE SCREEN MODES	Yes	Yes	Yes	Yes

KP-27 Plotter Comparison

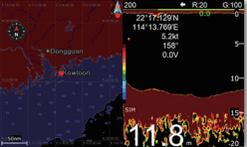| Model	KP-27	KP-27A	KP-27F	KP-27X
Display Size	7"	7"	7"	7"
Resolution	800x480	800x480	800x480	800x480
LCD Brightness	1000 nit	1000 nit	1000 nit	1000 nit
GNSS	GPS + Beidou + Glonass	GPS + Beidou	GPS + Beidou + Glonass	GPS + Beidou
Navionics+ Compatible	NAVIONICS A Garmin Brand	NAVIONICS A Garmin Brand	NAVIONICS A Garmin Brand	NAVIONICS A Garmin Brand
C-Map Max Compatible	C-MAP	C-MAP	C-MAP	C-MAP
K-Chart Map	K-CHART	K-CHART	K-CHART	K-CHART
NMEA Interface	NMEA0183 NMEA2000	NMEA0183 NMEA2000	NMEA0183 NMEA2000	NMEA0183 NMEA2000
GPS Antenna				
Fish Finder Feature	NO	NO	Dual Frequency (50 &200KHz)	Dual Frequency (50 &200KHz)
Built-in AIS	NO	Class B+	NO	Class B+
MULTIPLE SCREEN MODES	Yes	Yes	Yes	Yes

KP-29 Plotter Comparison

Model	KP-29	KP-29A	KP-29F	KP-29X
Display Size	9"	9"	9"	9"
Resolution	1024×600	1024×600	1024×600	1024×600
LCD Brightness	1000 nit	1000 nit	1000 nit	1000 nit
GNSS	GPS + Beidou + Glonass	GPS + Beidou	GPS + Beidou + Glonass	GPS + Beidou
Navionics+ Compatible	NAVIONICS A Garmin Brand	NAVIONICS A Garmin Brand	NAVIONICS A Garmin Brand	NAVIONICS A Garmin Brand
C-Map Max Compatible	C-MAP	C-MAP	C-MAP	C-MAP
K-Chart Map	K-CHART	K-CHART	K-CHART	K-CHART
NMEA Interface	NMEA0183 NMEA2000	NMEA0183 NMEA2000	NMEA0183 NMEA2000	NMEA0183 NMEA2000
GPS Antenna	Built-in	Built-in	Built-in	Built-in
Fish Finder Feature	NO	NO	Dual Frequency (50 &200KHz)	Dual Frequency (50 &200KHz)
Built-in AIS	NO	Class B+	NO	Class B+
MULTIPLE SCREEN MODES	Yes	Yes	Yes	Yes

DIFFERENT DISPLAY MODES

Plotter

Day mode — Night mode

Navigation Data

Day mode — Night mode

Battery

Day mode — Night mode

Compass

Day mode — Night mode

Highway

Day mode — Night mode

Gauges

Day mode — Night mode

Sounder

Day mode — Night mode

Sounder + Plotter

Day mode — Night mode

Satellite

Day mode — Night mode

AIS

Day mode — Night mode

Wind
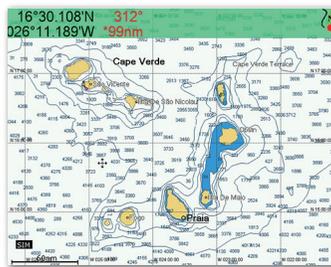
Day mode — Night mode

GPS CHART PLOTTER

Compatible with the following mapping systems:
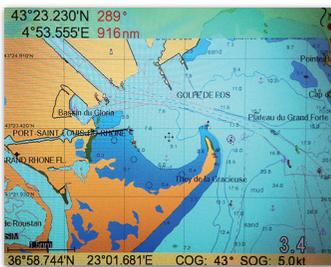
K-Chart Mapping System
ONWA Chart Plotters are compatible with K-Chart Mapping and displays worldwide Electronic Charts that users can use for FREE.

C-Map Max
ONWA Chart Plotters are also compatible with C-Map Max showing Nautical Charts

Navionics+
ONWA Chart Plotters when used with Navionics+ charts shows Nautical Charts and Sonar Charts. Advance options also include: Highlight Shallow Area, Adjust Contour Density and Shallow Fishing Range

STANDARD ACCESSORIES

**KA-012 GNSS Patch Antenna
(For KP-25/27 SERIES)**
with 4m cable (SMA connector)
Ingress Protection IP66

Quick Start Manuals
Standard installation materials

OPTIONAL ACCESSORIES

NMM40-50/200
BRONZE TRANSDUCER
Thru-hull Transducer 600W

KTD-TH520
PLASTIC TRANSDUCER
Thru-hull Transducer 600W

KTD-TM520
PLASTIC TRANSDUCER
Transom Mount Dual Frequency
600W

KA-09 GNSS Marine Antenna
External GNSS Antenna with
10m cable

❯ BUILT-IN HD FISH FINDER

∗Transducer required

- Applies the most advanced Digital Fish Finder Technology
- Dual Freqeuncy: 50 and 200kHz (alternately transmitted)
- Automatic Range and Gain adjustment depending on usage (Cruising or Fishing)

> Excellent Sea-bed Discrimination and easily identify fishes and school of fish
> Exact depth to where the school of fish is shown for ease of fishing

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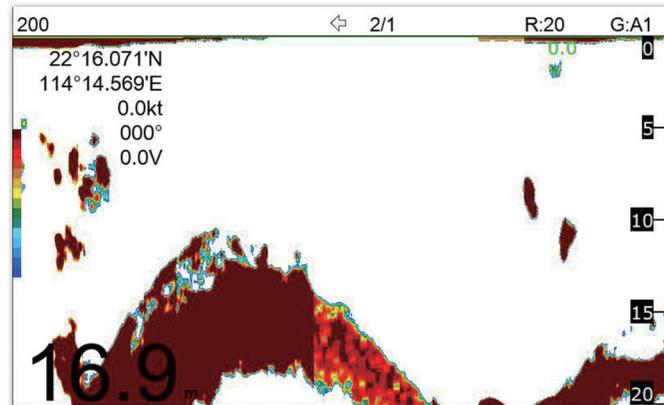
❯ DISPLAY MODES

DISPLAY MODES
> Selection of Display Modes depending on your needs
50 KHz, 200KHz, Dual, 50KHz/Zoom and 200KHz/Zoom
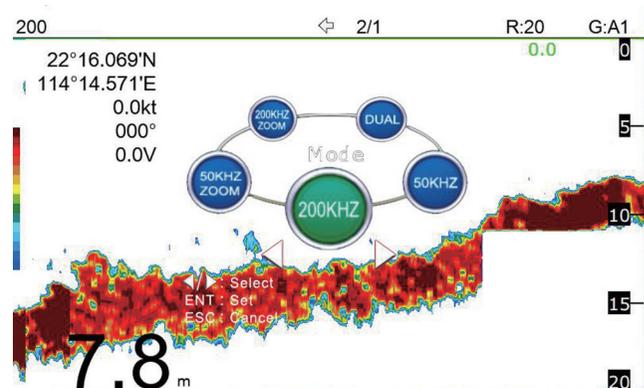
16 COLORS ACCORDING TO INTENSITY

Color bar shows 16 colors
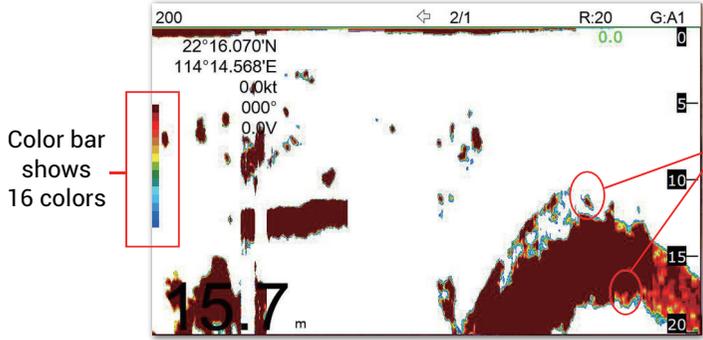
Can distinguish different strength of echoes by colors

SAVES THE POSITION OF A HISTORY ECHO IN WAYPOINT MEMORY

ZOOM MODES

Marker Zoom, Bottom Lock Zoom, & Bottom Zoom

MARKER ZOOM

> The marker area is zoomed and displayed on the left side screen

BOTTOM LOCK ZOOM

BOTTOM ZOOM

⟩ FISH, BOTTOM, AND TEMPERATURE ALARMS

Temperature sensor required for Temperature Alarm

Fish Alarm: Alarms when fish is seen at set range
Bottom Alarm: Alarms when the set bottom range is reached
Temperature Alarm: Used to warn the user when temperature reaches set temperature range

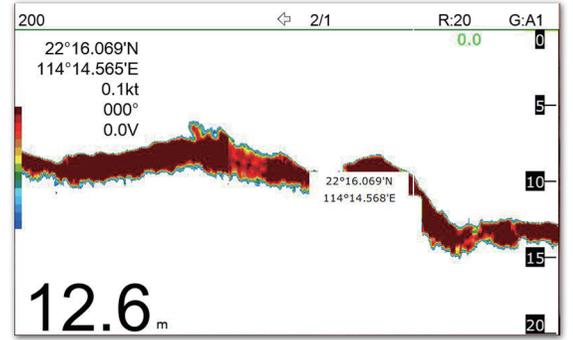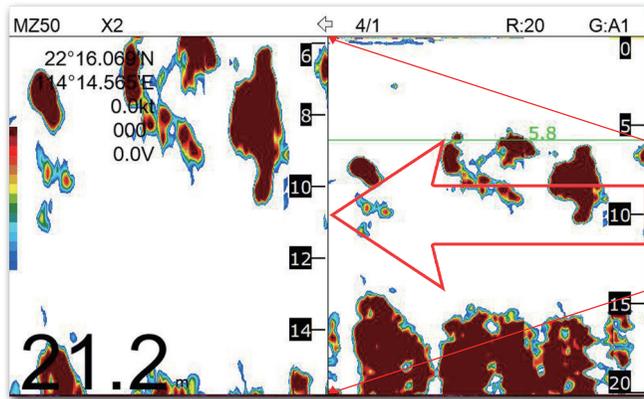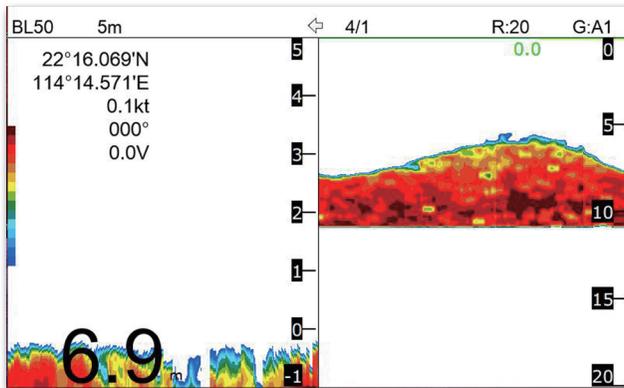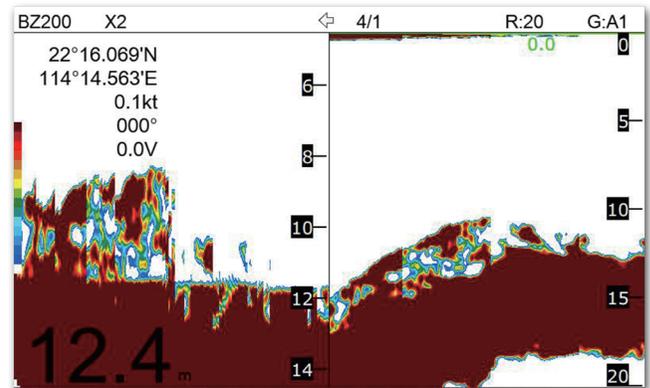> **OPTIONAL ACCESSORIES**   *(not included in the standard set)*

KTD-TM520	**NMM40-50/200**	**KTD-TH520**	**KTS-10K_TM**	**KTS-10K_TH**
Transom Mount Transducer 600W	Bronze Transducer Thru-hull Transducer 600W	Plastic Transducer Thru-hull Transducer 600W	Transom Mount Temperature Probe	Thru-Hull Temperature Probe

⟩ AIS FEATURES

VHF Antenna needed

CLASSB+

Class B+ AIS Technology

- **SOTDMA Technology** - Same technology used by Class A
  - Guaranteed time slot allocation
- **5W Transmission Power** - increases the range and AIS Satellite reception enabling Global tracking
- **Increased Transmission Rate** (Based on speed)

exactTrax™

exactTrax Tracking

> Integrated with exactTrax AIS satellite tracking technology service which provides the ability to track fishing boats and small commercial vessels with AIS Class B type transceivers across the globe

NOTE: In order to use exactTrax, user must avail ExactEarth Service

ExactTrax showing position of a vessel sailing for 1 week from Hong kong to Malaysia in multi-hour vessel track

AIS Target Tracking

ONWA AIS Plotters now has the ability to record tracks of AIS Targets
> **Manual AIS saved tracks:** Record Manually selected AIS targets, Max = 10 targets/records
- Recorded tracks are useful when checking the records during an accident
- Recorded tracks can be saved as a route

Points in the track shows the location, date, time, SOG and COG, etc.

Recorded Track saved as a route

CPA and TCPA Alarm

Alarm that helps the user to be aware of nearby vessels stating possible CPA and TCPA. The unit alarms until acknowledged

Vessel List

Shows nearby vessels, distance to your vessel and information. Selecting a target from the list shows the vessels details

AIS Targets Overlay in the Plotter Screen

Targets are overlaid in the Plotter screen and shows nearby AIS, pointing the cursor at one target shows the MMSI number and Location, selecting the target shows the targets ship details

PLOTTER CHARACTERISTICS

Waypoints/icons	12,000 user waypoints with name, symbol 3 system waypoints: MOB, Start , Cursor 10 proximity waypoints
Routes	30 routes waypoint up to 170 points each, plus MOB and Track Navigation or GOTO Track modes
Tracks	8,000 points automatic track log; 10 saved tracks (up to 8,000 track points each) lets you retrace your path in both directions
Alarms	XTE, Anchor drag, arrival, speed, voltage, proximity waypoint, Timer and AIS (CPA and TCPA) alarm
Drawing Marks	1000
Drawing Lines	2000
Drawing Placename	1000
Color for drawing	8
Palette	Normal Daylight exposed to sunlight Night in dark environment NOAA paperchart colors
Tides	Built-in Worldwide Tide data
Position format	Lat/Lon
Basemap	Worldwide
External Map	Compatible with K-Chart 2.0, K-Chart 3.0, C-Map Max and Navionics+
User data storage	Internal backup of user settings or external SD-card
Plot Interval	5secs to 60 mins or 0.01 to 10nm
Plotting scales	0.001 to 700nm
AIS	700 targets display
AIS Target Tracking	30 Manually saved tracks (300 points each)
Perspective View	On/off (Available for C-Map only)
Celestial	Sunrise/Sunset Moonrise/Moonset

NMEA0183 SENTENCE SUPPORTED

INPUT: auto scan baudrate
GGA, GLL, GSA, GSV, RMC, HDG, HDM, HDT, THS, ZDA, MTW, VWR, VWT, MWD, VDO, VDM, MTA, DBT, DPT, MWV, WPL, XDR.
OUTPUT Baudrate: Selectable 4800, 9600, 19200, 38400
GGA, GLL, RMC, GSA, GSV, AAM, APA, APB, BOD, BWC, BWR, DBT, DPT, HDT, MTW, RMB, VTG, WPL, XTE, ZDA, ZTG, ZDL, MWD, VPW, VWR, VWT, HDM, THS, MWV, XDR, VDO, VDM.
Outputs for Autopilot: APA, APB, XTE, BOD

GNSS RECEIVER CHARACTERISTICS

Receiver	56 parallel channel GNSS receiver continuously tracks and uses up to 56 satellites to compute and update your position
Acquisition time	Cold start: 35 seconds, Hot start: 1 second
Update rate	1 sec or 0.1 sec. selectable (For KP-25/KP-25F, KP-27/KP-27F, KP-29/KP-29F) 1 sec. (For KP-25A/KP-25X, KP-27A/KP-27X, KP-29A/KP-29X)
Accuracy	Position: 3 meters(95%) without S/A Velocity: 0.1 meter/sec without S/A
SBAS	Supported (For all models)
QZSS	Supported (For all models)
GNSS	Support GPS, Beidou and GLONASS (For KP-25/KP-25F, KP-27/KP-27F, KP-29/KP-29F) Support GPS and Beidou (For KP-25A/KP-25X, KP-27A/KP-27X, KP-29A/KP-29X)
Dynamics	Altitude: 18,000 m Velocity: 515 m/s
Datum	WGS 84 & User defined (For KP-25, KP-25F, KP-27/KP-27F, KP-29/KP-29F)

GPS INTERFACE

GNSS Data	RS2422 input/output, NMEA 0183 V3.01 and V4.11
GNSS Input Baudrate	Auto Scan (4800, 9600, 19200 and 38400)
GNSS Output Baudrate	Selectable among 4800, 9600, 19200 and 38400

EQUIPMENT LIST

Display unit
Quick manual
Panel Cutout Pattern
Mounting Bracket
GNSS Patch Antenna with 4m cable (SMA connector)
Standard Accessories Pack

AIS INTERFACE

AIS Data	RS232 output VDO, VDM, GGA, GSA, GSV and RMC
AIS Input Baudrate	38400 from GPS input port (For KP-25/KP-25F, KP-27/KP-27F, KP-29/KP-29F)
AIS Output Baudrate	38400 (For KP-25A/KP-25X, KP-27A/KP-27X, KP-29A/KP-29X)

AIS CHARACTERISTICS   For KP-25A/27A/29A KP-25X/27X/29X

Frequency Rate	156.026 MHz~162.025 MHz
Access Scheme	SOTDMA
Channel Bandwidth	25 KHz
Modulation	GMSK
Data Rate	9,600 bps
Number of AIS Transmitter	1
Number of AIS Receiver	2
AIS Channel 1	CH 87B (161.975 MHz)
AIS Channel 2	CH 88B (162.025 MHz)
Tx Power Output	5 Watt (37 dBm ± 1.5 dB)
RX Sensitivity	>112dBm @ 20% PER
RX Message Format	AIS Class A and B messages
Comply Standard	IEC-62287-1 IEC 62287-2 Ed. 2.0:2017

ECHO SOUNDER   For KP-25F/27F/29F KP-25X/27X/29X

Echo Color	16 colors (including background color) according to echo intensity. The background color is selectable from blue, white and black.
Basic Range *The basic ranges can be changed on the system menu	Meters 5/10/20/40/80/150/200/300/600/1000 Feet 15/30/60/120/200/400/600/1000/2000/3000 Fathoms 3/5/10/20/40/80/100/150/300/600
Range Shift	Up to 1000 meters (3000 feet, 600 fathoms)
Zoom Range	Times 2, 3, 4 and 6 ranges
Bottom Lock Expansion	5/10 meters,10/20 feet, 2/5 fathoms
Auto Mode	Automatic adjustment of range and gain
Display Mode	High Frequency (200K), Low Frequency (50K), Dual (200K and 50K 1/2 display on each), Zoom (200K and 50K zoom) and A-scope Display
Zoom Display	Marker Zoom, Bottom Zoom and Bottom-lock Expansion
Display Advance Speed	Lines/TX: Freeze, 1/8, 1/4, 1/2, 1/1, 2/1, 4/1, 6/1, 8/1 and 10/1
TX Frequency	50 and 200kHz (alternately transmitted)
Power Output	600W
Pulse-Length/TX Rate	

Display End Depth (m)	5	10	20	40	80	150	200	300	600	1000
Pulse Length 200K (µs)	120	120	320	520	920	1020	1020	1020	1020	1020
Pulse Length 50K (µs)	40	40	320	520	920	1020	1020	1020	1020	1020
TX Rate (pulse/min)	2000	1333	706	353	171	98	75	53	38	27
TX period (millisecond)	30	45	85	170	350	610	800	1120	1580	2200

Interference Rejecter	Rejects unwanted signals by comparing last and present echoes in strength
Alarm	Fish and Bottom alarms, Temperature alarm (sensor required)

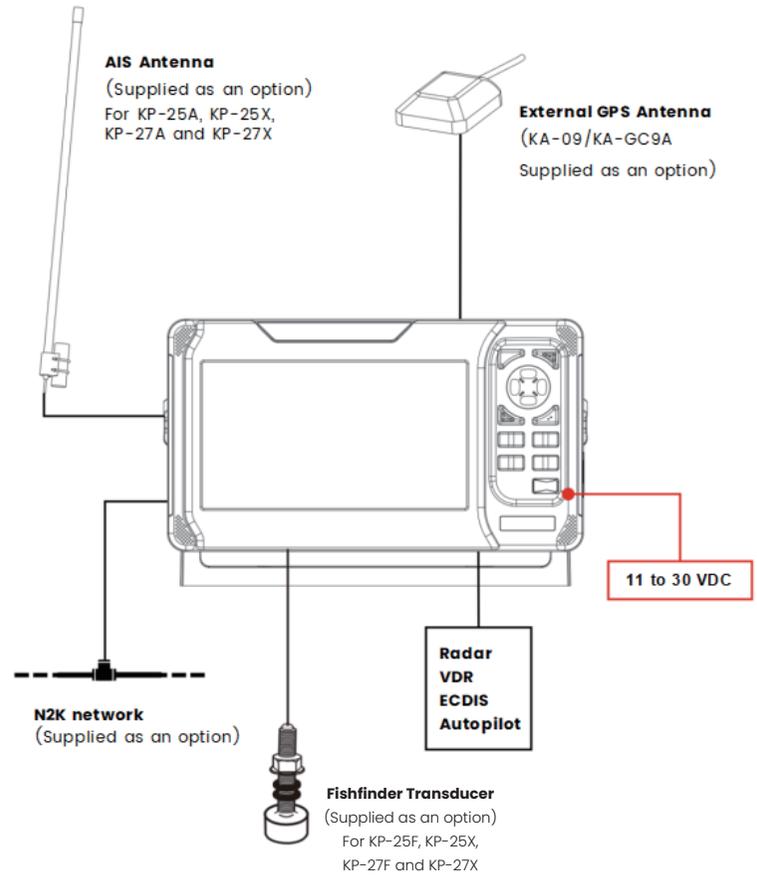## POWER SUPPLY

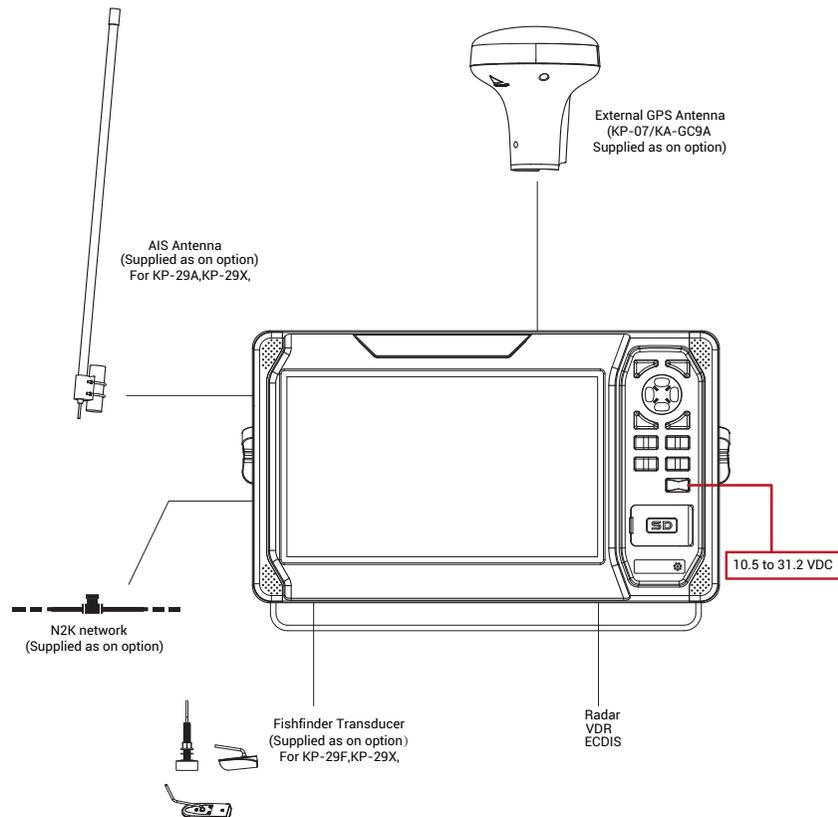|	
GNSS antenna	-25˚C to +70˚C
Operating Voltage	10.5V or 31.2V DC
Continuous Current	KP-25X: 720-840mA @ 12V DC/380~490mA @ 24V DC KP-27X: 820-930mA @ 12V DC/430~560mA @ 24V DC KP-29X: 1A-1.1A @ 12V DC/540~700mA @ 24V DC
Recommended	KP-25X: 2.8A @ 12V DC/1.4A @ 24V DC KP-27X: 3.0A @ 12V DC/1.5A @ 24V DC KP-29X: 3.2A @ 12V DC/1.6A @ 24V DC

PHYSICAL

Size	KP-25 Series : 126.3mm(H) X 215.3mm(W) X 63.4mm(D) KP-27 Series : 135.3mm(H) X 241.3mm(W) X 64.9mm(D) KP-29 Series : 295.5mm(L) X 172.5mm(W) X 77.7mm(H)
Weight	KP-25: 0.8 Kg; KP-25A: 0.9 Kg; KP-25F: 0.9 Kg; KP-25X: 1.0 Kg KP-27: 0.9 Kg; KP-27A: 1.1 Kg; KP-27F: 1.1 Kg; KP-27X: 1.2 Kg KP-29: 1.0 Kg; KP-29A: 1.2 Kg; KP-29F: 1.1 Kg; KP-29X: 1.3 Kg
Display	KP-25: 5-inch Color TFT day-view LCD 800x480 pixels KP-27: 7-inch Color TFT day-view LCD 800x480 pixels KP-29: 9-inch Color TFT day-view LCD 1024×600 pixels
Waterproofing	Display unit (front panel): IPX6 GPS antenna: IPX6
Temperature range	Display unit: -15°C to +55°C

NMEA2000 supported PGN

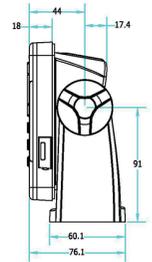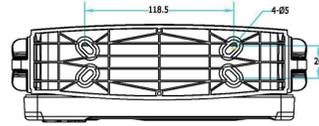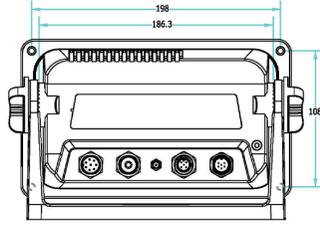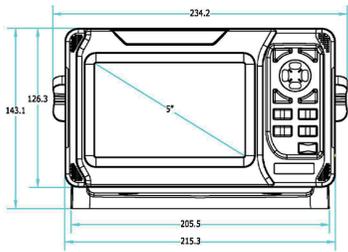| Receive	
127252	Heave
130576	Trim Tab Status
127497	Trip Fuel Consumption, Engine
127498	Engine Parameters, Static
127505	Fluid Level
130314	Actual Pressure
127493	Transmission Parameters, Dynamic
130316	Temperature, Extended Range
127508	Battery Status
127506	DC Detailed Status
127513	Battery Configuration Status
Transmit	
127251	Rate of Turn
127258	Magnetic Variation
128275	Distance Log
129033	Local Time Offset
129044	Datum
129291	Set & Drift, Rapid Update
129793	AIS UTC and Date Report
129794	AIS Class A Static and Voyage Related Data
129798	AIS SAR Aircraft Position Report
129809	AIS Class B "CS" Static Data Report, Part A
129810	AIS Class B "CS" Static Data Report, Part B
130578	Vessel Speed Components
129285	Navigation - Route/WP information
Support receive and transmit	
126992	System Time
127237	Heading/Track Control
127245	Rudder
127488	Engine Parameters, Rapid Update
127250	Vessel Heading
127489	Engine Parameters, Dynamic
128259	Speed, Water Referenced
128267	Water Depth
129025	Position, Rapid Update
129026	COG & SOG, Rapid Update
129029	GNSS Position Data
129038	AIS Class A Position Report
129039	AIS Class B Position Report
129040	AIS Class B Extended Position Report
129283	Cross Track Error
129284	Navigation Data
129539	GNSS DOPs
129540	GNSS Sats in View
130306	Wind Data
130310	Environmental Parameters - DEPRECATED
130311	Environmental Parameters - DEPRECATED
130312	Temperature - DEPRECATED

KP-25/27 INTERCONNECTION DIAGRAM

AIS Antenna
(Supplied as an option)
For KP-25A, KP-25X, KP-27A and KP-27X

External GPS Antenna
(KA-09/KA-GC9A
Supplied as an option)

11 to 30 VDC

N2K network
(Supplied as an option)

Radar
VDR
ECDIS
Autopilot

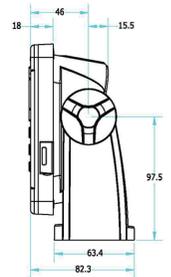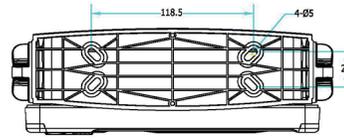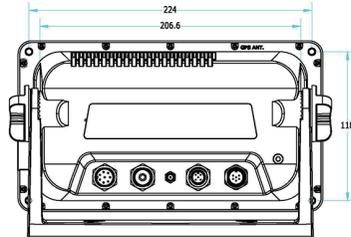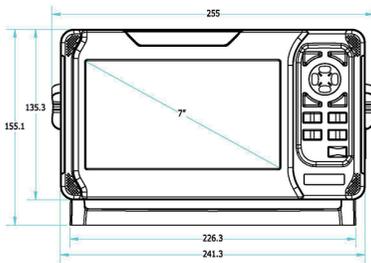**Fishfinder Transducer**
(Supplied as an option)
For KP-25F, KP-25X, KP-27F and KP-27X

KP-29 INTERCONNECTION DIAGRAM

External GPS Antenna
(KP-07/KA-GC9A
Supplied as on option)

AIS Antenna
(Supplied as on option)
For KP-29A,KP-29X,

10.5 to 31.2 VDC

N2K network
(Supplied as on option)

Fishfinder Transducer
(Supplied as on option)
For KP-29F,KP-29X,

Radar
VDR
ECDIS

DIMENSIONS (KP-25 SERIES)

DIMENSIONS (KP-27 SERIES)

DIMENSIONS (KP-29 SERIES)

Front view

Back view

Side view